UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,404	03/12/2004	Randy McNurlin	004.0003D1	1958

29906 7590 11/03/2004

INGRASSIA FISHER & LORENZ, P.C.
7150 E. CAMELBACK, STE. 325
SCOTTSDALE, AZ 85251

EXAMINER	
CHIN, PAUL T	

ART UNIT	PAPER NUMBER
3652	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,404	MCNURLIN ET AL.	
	Examiner	Art Unit	
	PAUL T. CHIN	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4* is/are allowed.

6)☒ Claim(s) *5-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment filed August 19, 2004, and the arguments presented therewith have been fully considered. Regarding the argument on the double patenting, they are persuasive and the rejection has been withdrawn. However, with regard to claims 5-8, the arguments are not persuasive and the claims 5-8 remain rejected by the references, Mallery et al. (6,558,562) and the Japanese Patent (02-288247). A final office follows below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Mallery et al. (6,558,562).

Mallery et al. (6,558,562) discloses an end effector for gripping a semiconductor wafer at its edge, comprising an elongated gripping assembly (Fig. 2) having a first end adapted for attachment to a controllable robot (Col 5, lines 38-42), and a second end opposite the first end; a first actuated wafer edge clamping assembly (60,62,64,66) proximate the first end of the gripping assembly and moveable between an open position and a wafer clamp position; a second wafer edge clamping assembly (38) proximate the second end of the gripping assembly, moveable between an open position and a wafer clamp

position; a wafer centering mechanism (44,46,48) configured to position a semiconductor wafer when the first actuated wafer edge assembly and the second actuated wafer edge assembly are in the open position.

Re claim 6, Mallery et al. (6,558,562) shows an actuator system (56,58).

4. Claims 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese Patent (02-288247).

The Japanese Patent (02-288247) discloses a wafer handling device comprising an elongated gripping assembly (4a) having a first end adapted for attachment, and a second end opposite the first end; a first actuated wafer edge clamping assembly (3b) proximate the first end of the gripping assembly and moveable between an open position and a wafer clamp position; a second wafer edge clamping assembly (2b) proximate the second end of the gripping assembly, moveable between an open position and a wafer clamp position; a wafer centering mechanism (2a,3a) configured to position a semiconductor wafer when the first actuated wafer edge assembly and the second actuated wafer edge assembly are in the open position.

Re claims 6 and 8, the Japanese Patent also shows an actuator system having a rod (12) for simultaneously actuating the first and second wafer edge clamping assemblies.

Re claim 7, the Japanese Patent further shows the first actuated wafer edge clamping assembly having a first pivotal catch mechanism (10,3b) configured to rotate about a first axis (8,14) coupled to the first end of the gripping assembly; and a second wafer edge clamping assembly having a second pivotal catch mechanism (9,2b) configured to rotate about a second axis (7) coupled to the second end of the gripping assembly.

Allowable Subject Matter

5. Claims 1-4 are allowed.

Response to Arguments

6. Applicant's amendment filed August 19, 2004, and the arguments presented therewith have been fully considered. Regarding the argument on the double patenting, they are persuasive and the rejection is withdrawn. However, with regard to claims 5-8, the arguments are not persuasive and the claims 5-8 remain rejected by the references, Mallery et al. (6,558,562) and the Japanese Patent (02-288247).

Applicant argues that the clamping assembly of Mallery et al. (6,558,562) "*is movable between an open position and a wafer clamping position*" (page 8). The argument is not persuasive because Mallery et al. (6,558,562) shows a first actuated wafer edge clamping assembly (60,62,64,66) proximate the first end of the gripping assembly and moveable between an open position and a wafer clamp position. Figures 6 and 7 clearly shows that one of the first wafer edge clamping assemblies, which is spring loaded or actuated cam (71) substantially clamping the wafer and Figure 9 shows an open position. Therefore, the first actuated wafer edge clamping assembly is capable of moving the open or clamping positions.

Applicant also argues that "*Mallery et al. (6,558,562) fails to disclose the recited "wafer centering mechanism configured to position a semiconductor wafer*" (page 8). The argument is not persuasive. Mallery et al. (6,558,562) shows an arc shaped member (44,46,48) (see Figs. 2 and 3), which can be considered as a wafer centering mechanism, configured to position a semiconductor wafer (see Fig. 3). The meaning of the word "configure" is defined as "to design, arrange, set up, or shape with a view to specific applications or uses" according to the American Heritage® Dictionary of the

English Language, Third Edition. Therefore, it is pointed out that the wafer centering mechanism of Mallery et al. (6,558,562) is always "*configured to position the wafer*" regardless of the functioning of the gripping assembly and is capable of positioning the wafer in combination with the wafer edge gripping assemblies.

Applicant further argues that "the Japanese Patent (02-288247) fails to discloses a wafer centering mechanism configured to position a semiconductor wafer" (page 9). The Japanese Patent (02-288247) discloses a wafer centering mechanism (2a,3a) (see Figs. 4 and 5) "configured to position a semiconductor wafer" when the first actuated wafer edge assembly and the second actuated wafer edge assembly are in the open position. It is also pointed out that the wafer centering mechanism (2a,3a) is ""configured to position a semiconductor wafer (W)" regardless of the functioning of the wafer actuated assemblies.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL T. CHIN whose telephone number is (703) 305-1524. The examiner can normally be reached on MON-THURS (7:30 -6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EILEEN LILLIS can be reached on (703) 308-3248. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ptc

PTC
October 26, 2004

EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600